

Copyright (c) 1993 - 2000 Compugen Ltd.	GenCore version 4.5				
Om protein - protein search, using sw model					
Run on:	March 1, 2001, 16:20:10 ; Search time 52.2 Seconds (without alignments) 36.422 Million cell updates/sec				
Title:	US-09-331-631A-32				
Perfect score:	76				
Sequence:	1 CXXCXXCXXXXXXXCXXXCXXXC 28				
Scoring table:	BLOSUM6DXX				
Gap open:	10.0 , Gapext 0.5				
Searched:	195891 seqs, 6790655 residues				
Total number of hits satisfying chosen parameters:	195891				
Minimum DB seq length:	0				
Maximum DB seq length:	2000000000				
Post-processing:	Minimum Match 0% Maximum Match 100% Listing first 45 summaries				
Database :	PIR 66.4				
	1: pir1;*				
	2: pir2;*				
	3: pir3;*				
	4: pir4;*				
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.					
SUMMARIES					
Result No.	Score	Query	Match Length	DB ID	Description
1	76	100.0	74	2	S25773
2	76	100.0	152	2	T18975
3	76	100.0	164	2	T24272
4	76	100.0	188	2	T15651
5	67	88.2	55	2	S25774
6	67	88.2	57	1	MKD025
7	67	88.2	57	2	S59073
8	67	88.2	58	1	SMKD015
9	67	88.2	58	2	S59072
10	67	88.2	58	2	A37039
11	67	88.2	58	2	A43367
12	67	88.2	63	2	S43372
13	67	88.2	68	2	S25775
14	67	88.2	98	1	KRCHF1
15	67	88.2	98	1	KRCHF2
16	67	88.2	98	2	S05807
17	67	88.2	98	2	S06806
18	67	88.2	98	2	S06808
19	67	88.2	118	2	S26689
20	67	88.2	154	2	T17816
21	67	88.2	157	1	W5M8R1
22	67	88.2	178	2	A2219
23	67	88.2	223	2	B48346
24	67	88.2	230	2	A48346
25	67	88.2	247	2	I48699
26	67	88.2	248	2	E1602
27	67	88.2	260	2	T17638
28	67	88.2	272	2	T36770
29	67	88.2	273	2	T16246

insulin-like growth
hypothetical prote
hypothetical prote
hypothetical prote
hypothetical prote
hypothetical prote
dacylglycerol kin
von Willebrand fac
hypothetical prote
hypothetical prote
hypothetical prote
hypothetical prote
hypothetical prote
hypothetical prote
IgG Fc binding pro
DNA repair prote
protein-tyrosine k

ALIGNMENTS

RESULT	1
C-Species:	Drosophila melanogaster
C-Date:	26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 20-Aug-1999
C-Accession:	S25773; B56565
R-Kuhn, R.; Kuhn, C.; Boersch, D.; Glaetter, K.H.; Schaefer, M.	Mech. Dev. 35, 143-151, 1991
A>Title:	A cluster of four genes selectively expressed in the male germ line of Drosophila
A-Reference number:	A56565; PMID:92102953
A-Map position:	S25773
A-Molecule type:	DN
A-Residues:	1-74 <KUH>
A-Cross-references:	EMBL:X67703; PIDN:gi1072; PIDN:CAA47938.1; PID:gi1074
A-Note:	sequence extracted from NCBI backbone (NCBIPN:7217, NCBIPN:74220)
A-Gene:	Mst84Db
A-Cross-references:	FLYBase:FBgn0004173
C-Superfamily:	fruit fly testis-specific protein
C-Keywords:	spermatogenesis; tandem repeat

Query	Match	Best Local Similarity		Score	DB	Length	2:	Matches	Conservative	Mismatches	O:	Indels	O:	Gaps	
QY	1	1 CXXCXXCXXXXXXXCXXXCXXXC 28		QY	1	1 CXXCXXCXXXXXXXCXXXCXXXC 28		QY	1	1 CXXCXXCXXXXXXXCXXXCXXXC 28		QY	1	1 CXXCXXCXXXXXXXCXXXCXXXC 28	
db	12	GSPCGGPGCGPGCGSCGSCGSCG 39		db	12	GSPCGGPGCGPGCGSCGSCGSCG 39		db	12	GSPCGGPGCGPGCGSCGSCGSCG 39		db	12	GSPCGGPGCGPGCGSCGSCGSCG 39	
RESULT	2	T18975		RESULT	2	T18975		RESULT	2	T18975		RESULT	2	T18975	
A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995		A-Submitted to the EMBL Data Library, June 1995	
A-Reference number:	219054	A-Reference number: 219054		A-Accession:	T18975	A-Accession: T18975		A-Status:	Preliminary	A-Status: Preliminary		A-Molecule type:	DN	A-Molecule type: DNA	
A-Residues:	1-152 <WHL>	A-Residues: 1-152 <WHL>		A-Residues:	1-152 <WHL>	A-Residues: 1-152 <WHL>		A-Residues:	1-152 <WHL>	A-Residues: 1-152 <WHL>		A-Residues:	1-152 <WHL>	A-Residues: 1-152 <WHL>	
A-Cross-references:	BML:Z49886; PTDN:CAA90055.1; GSPDB:GN00020; CESP:C06A1.6	A-Cross-references: BML:Z49886; PTDN:CAA90055.1; GSPDB:GN00020; CESP:C06A1.6		A-Experimental source:	clone C06A1	A-Experimental source: clone C06A1		A-Genetics:		A-Genetics:		A-Gene:	CEP:C06A1.6	A-Gene: CEP:C06A1.6	
A-Map position:	2	A-Map position: 2		A-Map position:	2	A-Map position: 2		A-Introns:	22/3	A-Introns: 22/3					

Query Match 100.0%; Score 76; DB 2; Length 152;
 Best Local Similarity 21.4%; Pred. No. 30;
 Matches 6; Conservative 22; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CXXCXXXCXXXXXXCXXCXXC 28
 Db 87 CCTCCRTCCCTRCCICRCGCCGC 114

RESULT 3

T24272 hypothetical protein T01B7.8 - *Caenorhabditis elegans*
 C;Species: *Drosophila melanogaster*
 C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 20-Aug-1999
 C;Accession: S25774; C56565
 R;Kuhn, R.; Kuhn, C.; Boersch, D.; Glaetzer, K.H.; Schaefer, U.; Schaefer, M.
 Mech. Dev. 35, 143-151, 1991
 A;Title: A cluster of four genes selectively expressed in the male germ line of *Drosophila*
 A;Reference number: A56565; MID:92102953
 A;Accession: S25774
 A;Molecule type: DNA
 A;Residues: 1-55 <KUH>
 A;Cross-references: EMBL:X67703; PIDN:CAA47939_1; PID:911075
 A;Note: the authors translated the codon TGC for residue 55 as Thr
 A;Note: sequence extracted from NCBI backbone (NCBIN:74217, NCBIP:74222)
 C;Genetics:
 A;Gene: Mst84dc
 A;Cross-references: FlyBase:FBgn004174
 A;Cross-references: FlyBase:FBgn004174
 A;Molecule type: DNA
 A;Map position: 3
 C;Superfamily: fruit fly testis-specific protein
 C;Keywords: spermatogenesis; tandem repeat

Query Match 100.0%; Score 76; DB 2; Length 164;
 Best Local Similarity 21.4%; Pred. No. 31;
 Matches 6; Conservative 22; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CXXCXXXCXXXXXXCXXCXXC 28
 Db 91 CCCCCRCCCTCCTCCTCCPCC 118

RESULT 4

T15651 hypothetical protein C27A2.5 - *Caenorhabditis elegans*
 C;Species: *Caenorhabditis elegans*
 C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
 C;Accession: T15651
 R;Nhan, M.

submitted to the EMBL Data Library, May 1996

A;Description: The sequence of C. elegans cosmid C27A2.
 A;Reference number: 218302
 A;Accession: T15651
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-188 <NHA>
 A;Cross-references: EMBL:US8760; MID:9133034; PIDN:91330389; PIDN:AAB00710_1; GSPDB:GN0C
 C;Genetics:
 A;Gene: CBSP:C27A2.5
 A;Map position: 2
 A;Introns: 19/3; 91/2

RESULT 6

SMD25 metallothionein 2 - mud crab
 C;Species: *Scylla serrata* (mud crab)
 C;Date: 19-Feb-1984 #sequence_revision 19-Feb-1984 #text_change 13-Sep-1996
 C;Accession: A03284
 R;Lerch, K.; Ammer, D.; Olafson, R. W.
 J. Biol. Chem. 257, 2420-2426, 1982
 A;Title: Crab metallothionein. Primary structures of metallothioneins 1 and 2.
 A;Reference number: A92363; MID:82142340
 A;Accession: A03284
 A;Molecule type: protein
 A;Residues: 1-57 <LEP>
 C;Superfamily: metallothionein
 C;Keywords: metal binding

Query Match 88.2%; Score 67; DB 1; Length 57;
 Best Local Similarity 18.5%; Pred. No. 87;
 Matches 5; Conservative 22; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CXXCXXXCXXXXXXCXXCXXC 27
 Db 30 CEQCSSGCKCANEDCRKTCSKpCSCC 56

RESULT 7

S59073 metallothionein isoform IIA - blue crab
 C;Species: *Callinectes sapidus* (blue crab)
 C;Accession: S59073
 R;Brouwer, M.; Enghild, J.; Hoexum-Brouwer, T.; Thøgersen, I.; Truncali, A.
 Biochem. J. 311, 617-622, 1995
 A;Title: Primary structure and tissue-specific expression of blue crab (*Callinectes sapidus*)
 A;Reference number: S59072; MID:96033062
 A;Accession: S59073
 A;Molecule type: protein
 A;Residues: 1-57 <PRO>
 C;Superfamily: metallothionein
 C;Keywords: metal binding

RESULT 5

S25774

		Query Match	88 2%; score 67; DB 2; Length 57;					
y	1	CXXCXXXCXXXXXXXXXXXXXCCXXX	27					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein 1 - mud crab						
		;Species: Scylla serrata (mud crab)						
		;Accession: A03283						
		;Title: Crab metallothionein. Primary structures of metallothioneins 1 and 2.						
		;Reference number: A92365; MUID:82142340						
		;Accession: A03283						
		;Molecule type: protein						
		;Residues: 1-58 <BRO>						
		;Note: the five Cys-X-Cys sequences are believed to be the principal metal-binding site						
		;Superfamily: metallothionein						
		;Keywords: metal binding						
RESULT	8							
b	30	CDKCSSECKTSKERCSCSKPSC	56					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein 1 - mud crab						
		;Lerch, R.; Kumer, D.; Olafson, R.W.						
		;Biol. Chem. 257, 2420-2426, 1982						
		;Accession: A03283						
		;Molecule type: protein						
		;Residues: 1-58 <BRO>						
		;Note: the five Cys-X-Cys sequences are believed to be the principal metal-binding site						
		;Superfamily: metallothionein						
		;Keywords: metal binding						
Query Match	88 2%; Score 67; DB 1; Length 58;							
Best Local Similarity	18 5%; Pred. No. 88;							
Matches	5; Conservative 22; Mismatches							
		0; Indels 0; Gaps 0;						
Y	1	CXXCXXXCXXXXXXXXXXXXXCCXXX	27					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein - green crab						
		;Species: Carcinus maenas (green crab, common shore crab)						
		;C Date: 19-Mar-1997 #sequence_revision 01-Feb-1999 #text_change 07-May-1999						
		;Accession: S43367						
		;C; Pedersen, K.L.; Pedersen, S.N.; Hojrup, P.; Andersen, J.S.; Roepstorff, P.; Knudsen Bloemberg, J. 297, 609-614, 1994						
		;A; Title: Purification and characterization of a cadmium-induced metallothionein from A; Reference number: S43367; MUID:94153337						
		A; Accession: S43367						
		A; Molecule type: protein						
		A; Residues: 1-58 <PED>						
		A; Note: the sequence from Fig. 4 is inconsistent with that from Fig. 6 in having an a						
		C; Superfamily: metallothionein						
		C; Keywords: metal binding; chelation; metal-thiolate cluster						
		F; 6, 12, 17, 21, 28, 31, 33, 34, 35, 36, 37/Binding site: transition metal ions (Cys) #status predicted						
		F; 31, 33, 34, 35, 36, 37/Binding site: transition metal ions (Cys) #status predicted						
RESULT	9							
b	30	CEKCSSGCKCANKKEECKSKCKAC	56					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein isoform Ia - blue crab						
		;Species: Callinectes sapidus (blue crab)						
		;Accession: S59072						
		;Title: Primary structure and tissue-specific expression of blue crab (Callinectes sapidus) residues: 1-58 <BRO>						
		;Accession: S59072; Reference number: S59072; MUID:96033062						
		;Molecule type: protein						
		;Keywords: metal binding						
Query Match	88 2%; Score 67; DB 2; Length 58;							
Best Local Similarity	18 5%; Pred. No. 88;							
Matches	5; Conservative 22; Mismatches							
		0; Indels 0; Gaps 0;						
Y	1	CXXCXXXCXXXXXXXXXXXXXCCXXX	27					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein 1 - American lobster						
		;Species: Homarus americanus (American lobster)						
		;Accession: A37039						
		;Brouwer, M.; Winge, D.R.; Gray, W.R.						
		;Inorg. Biochem. 35, 289-303, 1989						
		;Title: Structural and functional diversity of copper-metallothioneins from the America reference number: A37039; MUID:89215793						
RESULT	10							
b	30	CDKTSGRKCATKEECKSKCKTPSC	56					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein 1 - American lobster						
		;Species: Homarus americanus (American lobster)						
		;Accession: A37039						
		;Date: 31-Jan-1992 #sequence_revision 31-Jan-1992 #text_change 12-Apr-1995						
RESULT	11							
b	30	CEKCTSGCKCPSDEAKTCSKPC	56					
		:: :: :: :: :: :: :: :: :: :: :						
		Query Match	88 2%; Score 67; DB 2; Length 58;					
		Best Local Similarity	22 2%; Pred. No. 88;					
		Matches	6; Conservative 21; Mismatches					
		0; Indels 0; Gaps 0;						
Qy	1	CXXCXXXCXXXXXXXXXXXXXCCXXX	27					
		:: :: :: :: :: :: :: :: :: :: :						
		metallothionein - green crab						
		;Species: Carcinus maenas (green crab, common shore crab)						
		;C Date: 19-Mar-1997 #sequence_revision 01-Feb-1999 #text_change 07-May-1999						
		;C; Accession: S43367						
		R. Pedersen, K.L.; Pedersen, S.N.; Hojrup, P.; Andersen, J.S.; Roepstorff, P.; Knudsen Bloemberg, J. 297, 609-614, 1994						
		A; Title: Purification and characterization of a cadmium-induced metallothionein from A; Reference number: S43367; MUID:94153337						
		A; Accession: S43367						
		A; Molecule type: protein						
		A; Residues: 1-58 <PED>						
		A; Note: the sequence from Fig. 4 is inconsistent with that from Fig. 6 in having an a						
		C; Superfamily: metallothionein						
		C; Keywords: metal binding; chelation; metal-thiolate cluster						
		F; 6, 12, 17, 21, 28, 31, 33, 34, 35, 36, 37/Binding site: transition metal ions (Cys) #status predicted						
		F; 31, 33, 34, 35, 36, 37/Binding site: transition metal ions (Cys) #status predicted						
RESULT	12							
b	31	CEKCSSGCKCTKEDCKCTKTPSC	57					
		:: :: :: :: :: :: :: :: :: :: :						
		Query Match	88 2%; Score 67; DB 2; Length 58;					
		Best Local Similarity	18 5%; Pred. No. 88;					
		Matches	5; Conservative 22; Mismatches					
		0; Indels 0; Gaps 0;						
Qy	1	CXXCXXXCXXXXXXXXXXXXXCCXXX	27					
		:: :: :: :: :: :: :: :: :: :: :						
		testis-specific protein Mst84Da - fruit fly (Drosophila melanogaster)						
		;Species: Drosophila melanogaster						
		;Accession: S25772						
		C; Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 20-Aug-1999						
		C; Accession: S25772; A56565						
		R. Kuhn, R.; Kuhn, C.; Boersch, D.; Glaetzer, K.H.; Schaefer, U.; Schaefer, M.						
		Mech. Dev. 35, 143-151, 1991						
		A; Title: A cluster of four genes selectively expressed in the male germ line of Drosophila melanogaster						
		A; Reference number: A56565; MUID:92102953						
		A; Accession: S25772						
		A; Molecule type: DNA						
		A; Residues: 1-63 <RUH>						
		A; Cross-references: EMBL:X67703; NID:911072; PID:CAAN47937_1; PID:911073						
		A; Note: sequence extracted from NCBI backbone (NCBIN:74219, NCBIP:74224)						
		C; Genetics:						
		A; Gene: Mst84Da						
		A; Cross-references: FlyBase:FBgn0004172						
		A; Map position: 3						
		A; Introns: 13/3						
		C; Superfamily: fruit fly testis-specific protein						
		C; Keywords: spermatogenesis; tandem repeat						
RESULT	13							
b	31	CDKCSSECKTSKERCSCSKPSC	56					
		:: :: :: :: :: :: :: :: :: :: :						
		Query Match	88 2%; Score 67; DB 2; Length 63;					
		Best Local Similarity	18 5%; Pred. No. 92;					
		Matches	5; Conservative 22; Mismatches					
		0; Indels 0; Gaps 0;						

Qy 2 XXCXGCCXXXXXXXXXXXXXXCXXXCCXXC 28
 Db 14 GPCCGPGGGGPGCGCGPCCGC 40

RESULT 13
 S25775 testis-specific protein Mst84Dd - fruit fly (*Drosophila melanogaster*)
 C;Species: *Drosophila melanogaster*
 C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 20-Aug-1999
 C;Accession: S25775; D56555
 R;Kuhn, R.; Kuhn, C.; Boersch, D.; Glaetzer, K.H.; Schaefer, U.; Schaefer, M.
 Mech. Dev. 35, 143-151, 1991
 A;Title: A cluster of four genes selectively expressed in the male germ line of *Drosophila*
 A;Reference number: A56555; MUID:92102953
 A;Accession: S25775
 A;Molecule type: DNA
 A;Residues 1-68 <KUH>
 A;Cross-references: EMBL:67703; NIDB:911072; PIDN:CAA47940_1; PID:911076
 C;Genetics
 A;Gene: Msf84Dd
 A;Cross-references: FlyBase:FBgn0004175
 A;Map position: 3
 C;Superfamily: fruit fly testis-specific protein
 C;Keywords: spermatogenesis; tandem repeat

Query Match Best Local Similarity 88.2%; Score 67; DB 2; Length 68;
 Matches 5; Conservative 22; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CXXCXXCXXXXXXCXXXCXXX 27
 Db 13 CGPCCGPGCGCGPCCGCGPC 39

RESULT 14
 KRCHF1
 keratin I, feather - chicken
 C;Species: *Gallus gallus* (chicken)
 C;Date: 17-Dec-1982 #sequence_revision 12-Apr-1996 #text_change 22-Jun-1999
 C;Accession: S06805; A02948
 R;Pressland, R.B.; Gregg, K.; Molloy, P.L.; Morris, C.P.; Crocker, L.A.; Rogers, G.E.
 J. Mol. Biol. 209, 549-559, 1989
 A;Title: Avian keratin genes. I. A molecular analysis of the structure and expression of
 A;Reference number: S06805; MUID:9064515
 A;Accession: S06805
 A;Status: not compared with conceptual translation
 A;Molecule type: DNA
 A;Residues: 1-98 <PRE>
 R;Molloy, P.L.; Powell, B.C.; Gregg, K.; Barone, E.D.; Rogers, G.E.
 Nucleic Acids Res. 10, 6007-6021, 1982
 A;Title: Organisation of feather keratin genes in the chick genome.
 A;Reference number: R02848; MUID:83064534
 A;Accession: A02848
 A;Molecule type: DNA
 A;Residues: 2-98 <MOL>
 A;Cross-references: GB:J00847; NID:9212229; PIDN:AAA48930_1; PID:9212230
 A;Note: initiator Met not shown
 A;Note: a genomic clone containing five feather keratin genes was isolated and the centri
 C;Genetics:
 A;Note: keratin gene C
 C;Superfamily: feather keratin
 C;Keywords: epidermis; feather; fibrous protein; horn; integument

Query Match Best Local Similarity 88.2%; Score 67; DB 1; Length 98;
 Matches 5; Conservative 22; Mismatches 0; Indels 0; Gaps 0;
 Qy 2 XXCXGCCXXXXXXXXXXXXXXCXXXCCXXC 28
 Db 1 MSCFDLICRPCPTPLANSCNPCVROG 27

Query Match Best Local Similarity 88.2%; Score 67; DB 1; Length 98;
 Matches 5; Conservative 22; Mismatches 0; Indels 0; Gaps 0;
 Qy 2 XXCXGCCXXXXXXXXXXXXXXCXXXCCXXC 28
 Db 1 MSCYDLICRPCPTPLANSCNPCVROG 27

Search completed: March 1, 2001, 16:20:12
 Job time: 320 sec